

An opening 35 is formed on an assembly having a silicon germanium layer 32, a silicon layer 33, and a silicon oxide layer 34 sequentially formed on a silicon basis material 31. An additional silicon oxide layer 36 is formed so as to cover the silicon oxide layer 34 and an inner surface of the opening 35. Then, the silicon germanium layer 32 is removed by etching, and a thermal oxidation treatment and an annealing treatment are sequentially performed on the silicon basis material 31 and the silicon layer 33 to form thermal oxidation layers 37 and 38. Then, a flat film 39 is formed for flat treatment to manufacture a semiconductor substrate 10 having an island part 12 made of silicon buried in an insulation component 13 made of silicon oxide. This allows for easily forming a high-integration CMOSLSI based on inter-element isolation, and sufficiently reducing the SOI layer and the BOX layer in thickness, thereby preventing the short channel effect as well as forming the SOI layer and the BOX layer in multi-layers.